

iMAG 4700 Series FLANGED MAGMETER



RIGHT METER FOR

Water & Wastewater Treatment
Municipal
Pump skids
Pump stations
Packaged plants
Filtration systems
Reclaimed water
Hydraulic fracturing

Features

- Easy setup
- Minimal straight pipe
- Mounted or remote display
- Tamper-evident seal
- Certified to NSF/ANSI standard 61
- IP68 rated
- No moving parts
- Telemetry ready for wireless meter reading. Solutions available now by our sister company  **SIGNALFIRE**
— WIRELESS TELEMETRY —

The **iMAG-Series** is the most economical flanged electromagnetic flowmeter on the market. With electrodes designed to discourage fouling, it is available in 2" to 12" pipe in municipal or industrial water, waste and reclaimed water, pump stations, and packaged plant applications. Minimal straight pipe requirements allow iMAG-Series meters to be used in piping configurations where there is little space between the meter and an elbow.

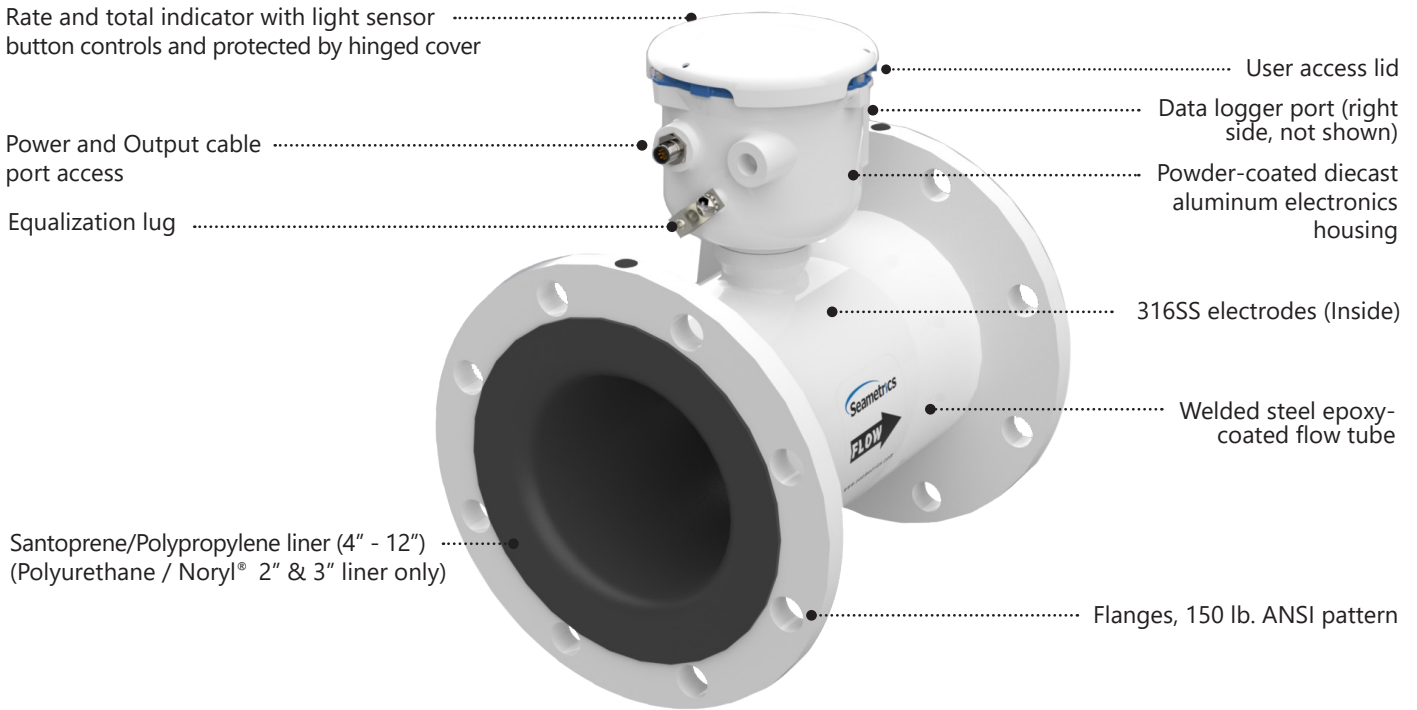
iMAG-Series meters are CE certified, certified to NSF/ANSI standard 61 and are rated IP68 for applications where the meter may be operated under water to a depth of at least 10 feet (3 meters) continuously.

The display can be meter mounted or remote, and both rate and total indication are standard. Rate and total units and pulse scaling can be set via the front panel touch key pad by the user. Bidirectional flow reading is standard with totals available in forward, reverse, net flow, batch forward flow, and batch reverse flow. Built-in data logging is available as an option for secure flow logging.

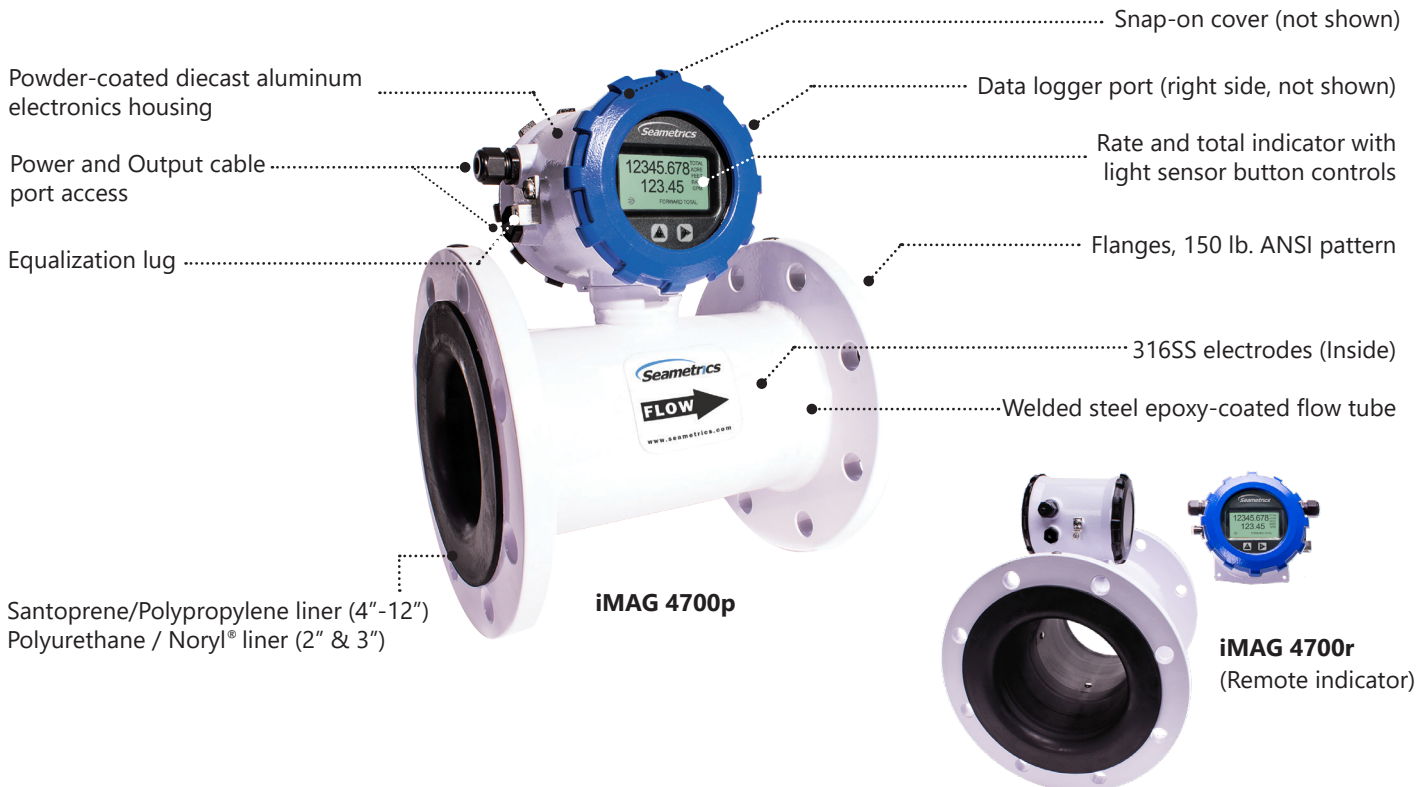
The iMAG 4700 is also available in either AC or DC powered versions, with battery backup. Pulse output is standard on all models, while 4-20mA passive current loop is also standard on the iMAG 4700p. 4-20mA loop is optional on the iMAG 4700 and iMAG 4700r externally powered meters and Modbus® protocol outputs are optional on all models although battery life will be reduced if ordered on battery powered units. A power/output cable allows outputs for use with a variety of Seametrics displays and other controls for remote reading and telemetry applications.

Contact Your Supplier

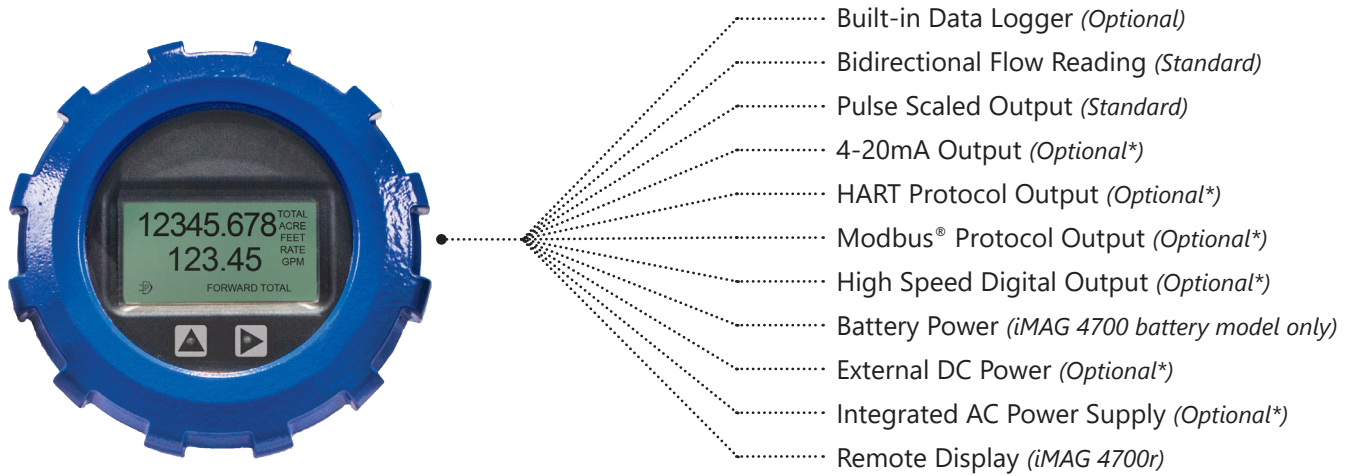
Features



iMAG 4700

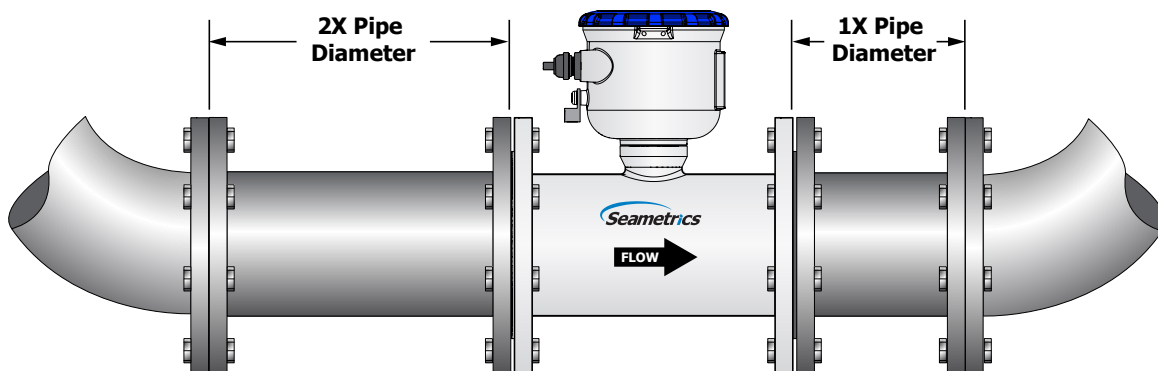


Features



Quickly and easily change Total Volume Units, Flow Rate Units, Pulse Output Scaling, and many other settings using the two light sensor button controls on the display panel.

** Some optional items only available on some configurations. See last page for further details.*



Minimal straight pipe requirements to ease installation in tight quarters.

Specifications

Pipe Sizes	2", 3", 4", 6", 8", 10", 12"					
Flanges	150 lb. ANSI Pattern					
Pressure	150 psi (10.3 bar) line pressure					
Temperature	Operating 10° to 140° F (-12° to 60° C)					
	Storage -40° to 158° F (-40° to 70° C)					
Accuracy	±0.75% of reading on iMAG 4700p and 4700r (±1.0% iMAG 4700), ±0.025% of full-scale flow from low flow cutoff to maxi. flow rate of 10 m/sec					
Low Flow Cutoff	0.5% of maximum flow rate					
Material	Body (2"-12")	Welded steel, epoxy-coated				
	Liner (2" & 3")	Polyurethane/Noryl®				
	Liner (4"-12")	Santoprene flange/Polypropylene liner body				
	Electronics Housing	Powder-coated diecast aluminum				
	Electrodes	316 stainless steel				
Display	Type	128x64 dot-matrix LCD				
	Digits	5 Digit Rate		8 Digit Total		
	Units	Rate Volume Units	Rate Time Units	Total Volume Units		
	<i>Please Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be set in the field.</i>	Gallons Liters Barrels(42 gal) Cubic Feet Cubic Meters	Million Gallons ² Mega Liters ² Imperial Gallons Million Imperial Gallons ²	Second Minute Hour Day	Gallons Gallons x 10 Gallons x 100 Gallons x 1000 Million Gallons Liters Kilo Liters Mega Liters	Barrels (42 gal) Cubic Meters Cubic Meters x 1000 Cubic Feet Cubic Feet x 100 Cubic Feet x 1000 Second Foot Day Million Cubic Feet
	Bidirectional¹	Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total ³				
Power	DC Power	9-36 Vdc @ 250 mA max, 30 mA average				
	Battery Backup <i>(Not for use as primary power)</i>	DC powered units: One lithium 7.2V 'D' size battery pack, replaceable. AC powered units: One 9V alkaline battery, replaceable.				
	AC Power	85-264Vac, 50/60Hz, 0.12A (iMAG 4700r and 4700p only)				
	Battery	One lithium 7.2V 'D' size battery pack, replaceable. (iMAG 4700 only)				
Scaled Pulse Output	Signal	Current sinking pulse, isolated, 36 Vdc at 10 mA max				
	Pulse Rates	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width is one-half of pulse period with minimum pulse width of 2.5 ms, 200 pulses/sec max. For battery option meters, pulse width varies with frequency, 150 pulses/sec max.				
Options	4-20mA Current Loop	Isolated, passive, 24Vdc, 650 Ω maximum current loop				
	HART/4-20mA	HART protocol over 4-20mA line (iMAG4700p & iMAG4700r only)				
	High Speed Digital	Isolated, open collector, 24 Vdc (iMAG4700p only)				
	Serial Communications	Isolated, asynchronous serial RS485, Modbus® RTU protocol				
Cable	Power/Output Cable	20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).				
	Remote Display Cable	20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available). (iMAG 4700r)				
Conductivity	>20 microSiemens/cm					
Empty Pipe Detection	Hardware/software, conductivity-based					
Regulatory	CE (EN 61326), 2"-12" certified to NSF/ANSI standard 61 60°C (140°F)					
Environmental	NEMA 6P, IP68 (10ft (3m) depth, continuously)					

Modbus is a registered trademark of Schneider Electric.

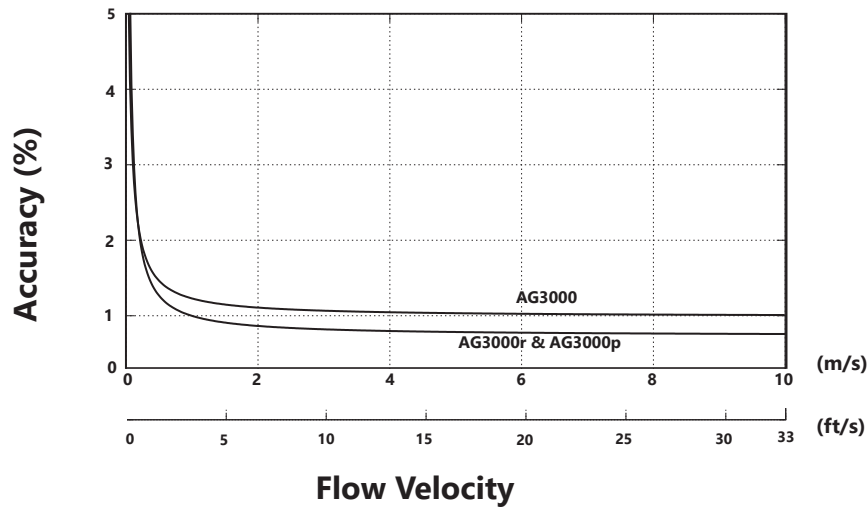
* Specifications subject to change. Please consult our website for the most current data (www.seametrics.com).

¹ If forward and reverse flow data needs to be sent to another device, either the Digital or Modbus output is required.

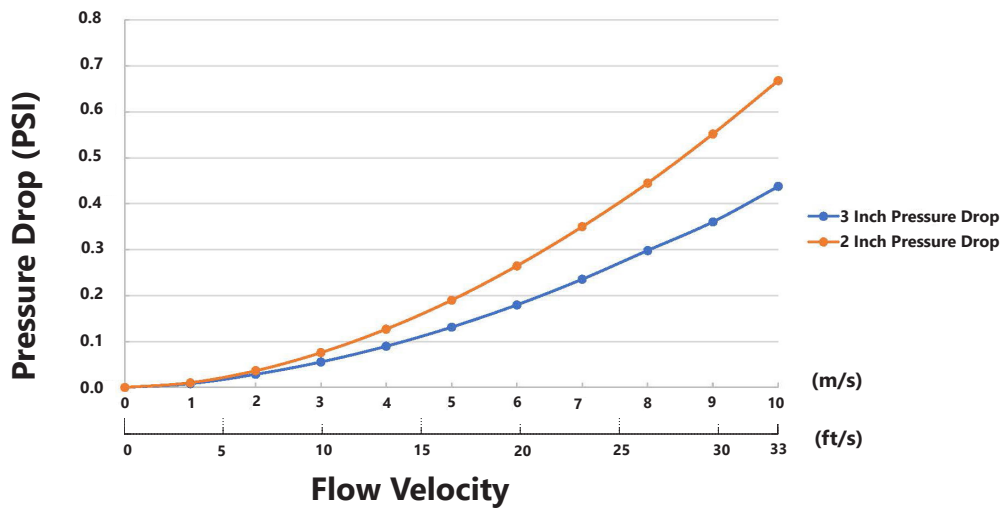
² Rate Time Unit is available in Day only.

³ Forward and reverse flow totals are non-resettable. Batch forward and batch reverse totals can be reset.

iMAG Accuracy



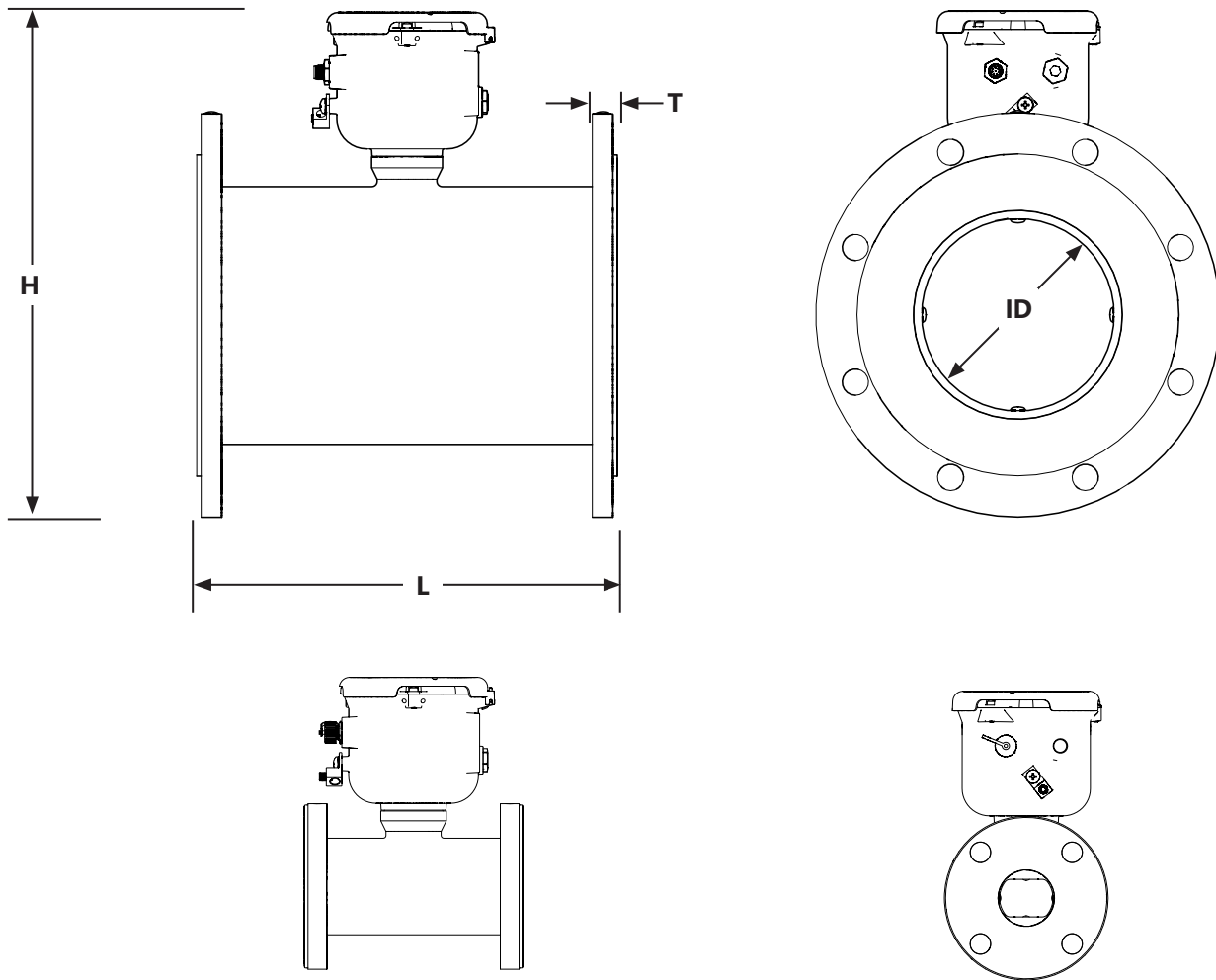
2" & 3" Pressure Drop Curve (No Pressure Drop 4"-12")



Flow Rate (2" - 12")

Pipe Size (Inches in diameter)	2"	3"	4"	6"	8"	10"	12"
Max Flow Rate (Gallons/Minute)	321	722	1285	2891	5140	8031	11565
Cut-off (min) Flow Rate (Gallons/Minute)	2	4.0	6.43	14.46	25.70	40.15	57.82
Max Flow Rate (Liters/Second)	20.25	46	81	182	324	507	730
Cut-off (min) Flow Rate (Liters/Second)	0.13	0.23	0.41	0.91	1.62	2.54	3.65
Max Flow Velocity (Meters/Second)	10	10	10	10	10	10	10

Dimensions - iMAG 4700



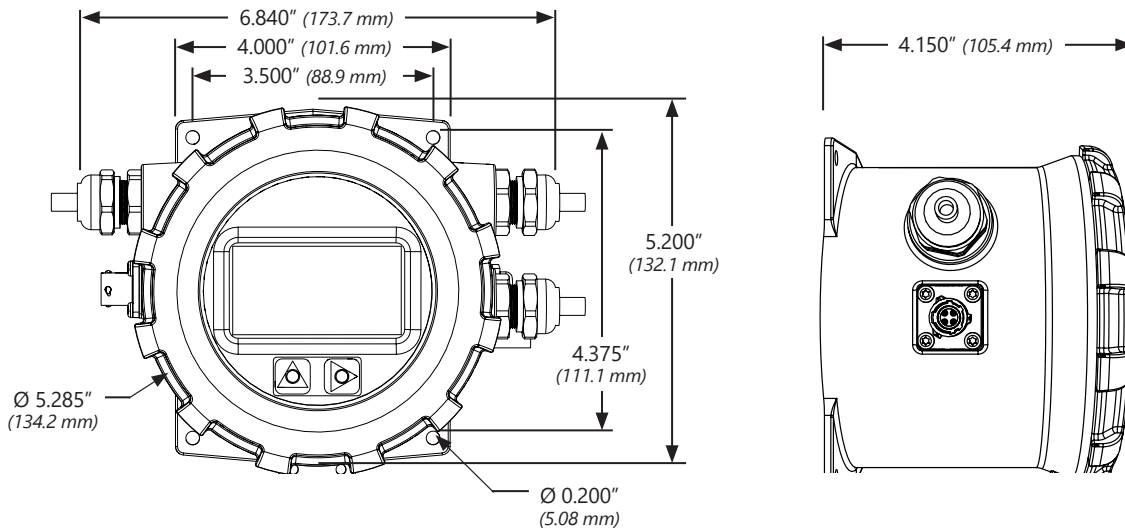
iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg
2"	7.9	200	7.6	193	.62	15.7	1.76*	45*	25	11.3
3"	7.9	200	8.1	206	.62	15.7	2.68*	68*	30	13.6
4"	10.12	257	8.3	211	.62	15.7	3.12	79	33	15
6"	12.09	307	9.1	231	.69	17.5	5.05	128	49	22
8"	14.14	359	10.1	257	.69	17.5	6.44	164	70	32
10"	18.08	459	11.2	284	.69	17.5	8.61	219	130	59
12"	19.68	500	12.2	310	.81	20.6	10.55	268	170	77
Flanges	Standard ANSI 150 lb. drilling								Cable 1 lb.	

Note: 'L' dimension is total from liner face to liner face

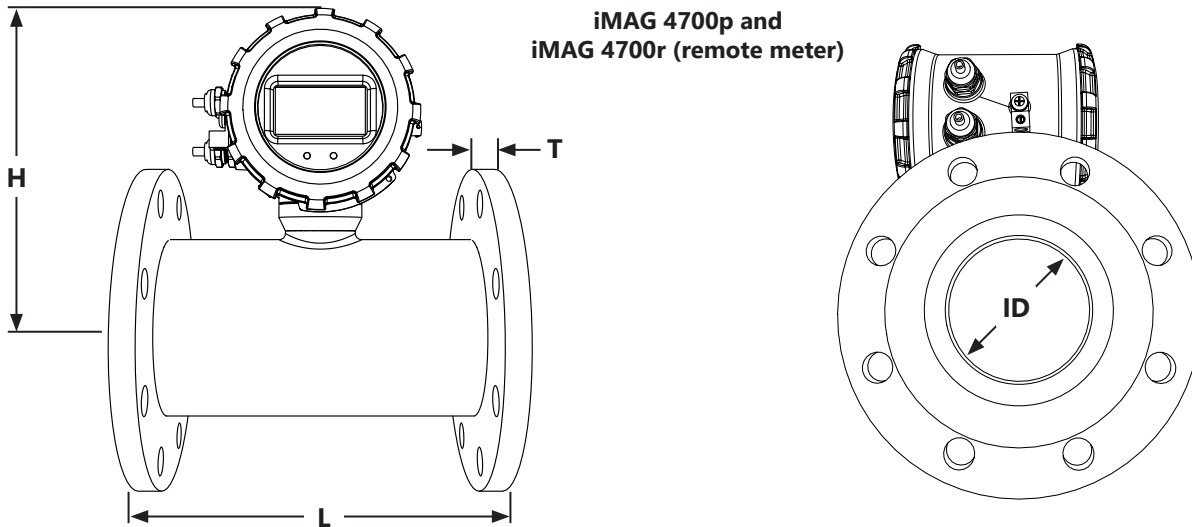
*Average ID

Dimensions - iMAG 4700r and iMAG 4700p

iMAG 4700r (remote display)



iMAG 4700p and iMAG 4700r (remote meter)



iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight			
	inch	mm	inch	mm	inch	mm	inch	mm	iMAG4700p		iMAG4700r	
									lbs	Kg	lbs	Kg
2"	7.9	200	7.6	193	.62	15.75	1.76*	45*	26	12	35	15.9
3"	7.9	200	8.1	205.7	.62	15.75	2.68*	68*	27	12.5	36	16.5
4"	10.12	257	8.6	218	.62	15.75	3.12	79	34	15.5	43	19.5
6"	12.09	307	9.4	239	.69	17.5	5.05	128	50	22.5	59	27
8"	14.14	359	10.4	264	.69	17.5	6.44	164	71	32	78	35
10"	18.08	459	11.5	292	.69	17.5	8.61	219	130	59	135	61
12"	19.68	500	12.5	317	.81	20.6	10.55	268	170	77	175	79
Flanges	Standard ANSI 150 lb. drilling								Cable 1 lb.			

Note: 'L' dimension is total from liner face to liner face

How to Order Worksheet

<p>iMAG 4700</p> <p>iMAG 4700p</p> <p>iMAG 4700r</p>	1	2	3	4	5	6	7	8
	□ □ □ □	□ □	□	□ □	□	□ □	□ □ □ □	□ □ □ □
	□ □ □ □	□ □	□	□ □	□	□ □	□ □ □ □	□ □ □ □
	□ □ □ □	□ □	□	□ □	□	□ □	□ □ □ □	□ □ □ □

2 Style: F1 = 150 lb ANSI Pattern
4 Power: D1 = DC 60Hz, D2 = DC 50Hz
 A1 = AC 60Hz, A2 = AC 50Hz
 BX = Battery
5 Outputs: X = No optional output
 L = 4-20mA S = Modbus®
 H = HART/4-20mA G = Digital

iMAG 4700 (Integrated Display)	1	2	3	4	5	6	7	
	Size	Style	Gaskets ³	Power	Optional Output ² <i>(The 4700 comes standard with one pulse output)</i>	Options	DC Power/Output Cable <i>(Must select one)</i>	
-0200* 2" -0300 3" -0400 4" -0600 6" -0800 8" -1000 10" -1200 12"	-F1	-X None -R Non NSF -P NSF	-D1 -D2	-X <i>(requires 4 conductor cable for DC power & output)</i> -L <i>(requires 8 conductor cable for DC power & output)</i> -S <i>(requires 8 conductor cable for DC power & output)</i>	-XX None -01 Data Logger	-0000 No Cable <i>(Cable required for power/output)</i> <u>4 Conductor</u> <u>8 Conductor</u> -0064 -0068 6 meter (20 ft) -0154 -0158 15 meter (50 ft) -0304 -0308 30 meter (100 ft) -0454 -0458 45 meter (150 ft) -0604 -0608 60 meter (200 ft)		
							-BX	-X <i>(requires 4 connector cable for pulse output)</i> -S <i>(requires 8 connector cable for output)⁴</i>

iMAG 4700p (Integrated Display)	1	2	3	4	5	6	7	
	Size	Style	Gaskets	Power ¹	Optional Output ² <i>(The 4700p comes standard with 4-20mA and one pulse output)</i>	Options	DC Power/Output Cable - 8 conductor <i>(Must select one)</i>	
-0200* 2" -0300 3" -0400 4" -0600 6" -0800 8" -1000 10" -1200 12"	-F1	-X None -R Non NSF -P NSF	-D1 -D2	-X <i>(requires single cable for DC power & output)</i> -H <i>(requires single cable for DC power & output)</i> -S <i>(requires dual cable for DC power & output)</i> -G <i>(requires dual cable for DC power & output)</i>	-XX None -01 Data Logger	-0000 No Cable <i>(customer will supply)</i> <u>Single</u> <u>Dual</u> -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)		
							-A1 -A2	-X <i>(requires single cable for output)</i> -H <i>(requires single cable for output)</i> -S <i>(requires single cable for output)</i> -G <i>(requires single cable for output)</i>

iMAG 4700r (Remote Display)	1	2	3	4	5	6	7	8	
	Size	Style	Gaskets	Power ¹	Optional Output ² <i>(The 4700r comes standard with one pulse output)</i>	Options	DC Power/Output Cable - 6 conductor <i>(Must select one)</i>	Remote Display Cable - 6 conductor <i>(Must select one)</i>	
-0200* 2" -0300 3" -0400 4" -0600 6" -0800 8" -1000 10" -1200 12"	-F1	-X None -R Non NSF -P NSF	-D1 -D2	-X <i>(requires single cable for DC power and output)</i> -L <i>(requires single cable for DC power and output)</i> -H <i>(requires single cable for DC power and output)</i> -S <i>(requires dual cable for DC power and output)</i>	-XX None -01 Data Logger	-0000 No Cable <i>(customer will supply)</i> <u>Single</u> <u>Dual</u> -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)	-006 6 meter (20 ft) -015 15 meter (50 ft) -030 30 meter (100 ft) -045 45 meter (150 ft) -060 60 meter (200 ft)		
								-A1 -A2	-X <i>(requires single cable for output)</i> -L <i>(requires single cable for output)</i> -H <i>(requires single cable for output)</i> -S <i>(requires single cable for output)</i>

Modbus is a registered trademark of Schneider Electric. Viton is a registered trademark of DuPont Corporation.

Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.

¹ AC meters come with a 1.8 meter (6 ft) AC power cable.

² You can choose up to one additional output on powered meters only.

³ If -X is selected, customer must provide full faced gaskets. Failure to install gaskets will void warranty. No charge for non NSF (-R) gaskets.

⁴ Battery life is shortened when using Modbus with battery powered units. Expected battery life is approximately 1 year, based on usage.

User is responsible for reviewing end use application with their supplier for product suitability.